

Application Serial Number: 09/885,408
In response to Office Action dated September 29, 2003

IN THE CLAIMS

Claims 1-13 are presented below:

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1. (Currently Amended) A communication method comprising the steps of:
 - a) transmitting an ACK signal indicating that a received packet includes no error or a NACK signal indicating that the received packet includes error from a reception end station to a transmission end station, and performing automatic repeat request;
 - b) obtaining reliability of the received packet when demodulating it at the reception end station; and
 - c) reporting from the reception end station to the transmission end station the reliability of the received packet, utilizing the ACK/NACK signal by using not less than three levels;
 - d) determining based on the reliability of said received packet whether or not said received packet should be stored to be combined with a re-transmission packet, when said received packet includes an error; and
 - e) performing re-transmission control based on the determination made in said step d).

2. (Canceled).

3. (Currently Amended) The method as claimed in claim 1, further comprising the step of [[d]] f) performing control of a transmission parameter at the transmission end based on the ACK/NACK signal transmitted from the reception end.

4. (Currently Amended) A communication method in a mobile communication system performing power control at a transmission ~~end station~~ so that reception quality at a reception ~~end station~~ may be kept constant, comprising the steps of:

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- a) transmitting an ACK signal indicating that a received packet includes no error or a NACK signal indicating that the received packet includes error from a reception ~~end station~~ to a transmission ~~end station~~, and performing automatic repeat request; and
 - b) storing a history of the received ACK/NACK signals, and performing control of a transmission parameter at the transmission end utilizing at least one the ACK/NACK signal and a transmission power control signal at the transmission station; and
 - c) performing re-transmission control based on the transmission parameter.

5. (Currently Amended) The method as claimed in claim 4, further comprising the step of [[c]]] d) re-transmitting a retransmission packet re-built so as to be able to be properly combined with an already transmitted packet at the reception end, when an information transmission rate for transmission from the transmission end is changed through the transmission parameter control at the transmission end.

6. (Currently Amended) A communication method in a mobile communication system, comprising the steps of:

- a) a reception station transmitting an ACK signal indicating that a received packet includes no error or a NACK signal indicating that the received packet includes error, from a reception end to a transmission ~~end station~~, and performing automatic repeat request; and

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b) when uplink site diversity reception is performed such that a plurality of base reception stations simultaneously receive a signal transmitted from a mobile transmission station, the plurality of reception stations generating the ACK/NACK signals at the plurality of base stations, and transmitting them to the mobile transmission station and a host station of the plurality of base reception stations, then the mobile station as the transmission end using the ACK/NACK signals from the plurality of base stations and performing re-transmission control.

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c) said host station of the plurality of reception stations receiving the ACK/NACK signals from the plurality of reception stations, and, upon receiving more than n ACK signals, where n denotes an integer not less than 1, generating the ACK signal so as to transmit it to the respective reception stations; and

d) said transmission station performing re-transmission control utilizing the ACK/NACK signals from the plurality of reception stations.

7. (Canceled).

8. (Currently Amended) The method as claimed in claim 6, further comprising the step of [[c]] e) determining at the mobile station that proper reception was performed at the reception end, when the mobile station receives the ACK/NACK signals from the plurality of base stations which include not less than n (≤ 1) ACK signals.

9. (Currently Amended) A communication method in a mobile communication system, comprising the steps of:

a) a reception station transmitting an ACK signal indicating that a received packet includes no error or a NACK signal indicating that the received packet includes error, ~~from a reception end to a transmission end station~~, and performing automatic repeat request; and

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b) when uplink site diversity reception is performed such that a plurality of base reception stations simultaneously receive a signal transmitted from a mobile transmission station, the reception station obtaining reliability of a received packet upon demodulating the received packet, and reporting to the transmission station and a host station of the plurality of reception stations the reliability of the received packet with the ACK/NACK signal by not less than three levels; and

c) said host station generating based on the plurality ACK/NACK signals reported thereto the ACK/NACK signal at a ~~host station of the plurality of base stations~~, and, said plurality of reception stations transmitting from the plurality of base stations the same ACK/NACK signals generated by the host station to the mobile transmission station.

10. (Original) A communication method in a mobile communication system, comprising the steps of:

a) transmitting an ACK signal indicating that a received packet includes no error or a NACK signal indicating that the received packet includes error, from a reception end to a transmission end, and performing automatic repeat request; and

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b) when downlink site diversity reception is performed such that signals transmitted from a plurality of base stations are simultaneously received by a mobile station, demodulating a received packet at the mobile station, generating the ACK/NACK signal, and transmitting it; and

c) when a host station of the plurality of base stations receives the ACK/NACK signals via the plurality of base stations which include not less than n (≤ 1) ACK signals, determining that the plurality of base stations performed proper reception, then re-transmission control being performed at the plurality of base stations.

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11. (Currently Amended) A base station using an ACK/NACK signal and performing automatic repeat request, wherein said base station participates in uplink site diversity such that as one of a plurality of base stations that simultaneously receive a signal transmitted from a mobile station, said base station comprising:

a part generating the ACK/NACK signal and transmitting it to the mobile station and to a host station; and

a part receiving the common ACK/NACK signal from the host station of the plurality of base stations.

12. (Currently Amended) A base station using an ACK/NACK signal and performing automatic repeat request, wherein said base station participates in uplink site diversity such that as one of a plurality of base stations that simultaneously receive a signal transmitted from a mobile station, said base station comprising:

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a part transferring a received packet to the host station of the plurality of base stations;

and

a part receiving the common ACK/NACK signal from the host station of the plurality of base stations, and transferring it.

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13. (Currently Amended) A base station receiving an ACK/NACK signal and performing re-transmission control, said base station participating in downlink site diversity as one of a plurality of base stations that simultaneously receive such that the ACK/NACK signal transmitted from a mobile station ~~is received by a plurality of base stations simultaneously~~, said base station comprising:

a part transferring the received ACK/NACK signal to a host station of the plurality of base stations; and

a part receiving a signal concerning the ACK/NACK signal from the host station of the plurality of base stations, and performing re-transmission control.